

**MINUTES OF THE RULES CHANGE PANEL
46th MEETING
HELD ON TUESDAY, 3 NOVEMBER 2009 AT 10:05AM
AT ENERGY MARKET CO. PTE LTD
238A THOMSON ROAD #11-01
NOVENA SQUARE, SINGAPORE 307684**

Present: Dave Carlson Kenneth Lim
 Yeo Lai Hin Brendan Wauters
 Sim Meng Khuan Philip Tan
 Chan Hung Kwan Goh Bee Hua
 Annie Tan Dallon Kay
 Robin Langdale Ng Meng Poh

Absent with Michael Lim
apologies Lawrence Lee

In Attendance: Paul Poh Tan Liang Ching
(EMC) Mok XinYing Nerine Teo
 Henry Wee Wang Jing

1.0 Notice of Meeting

The Chairman called the meeting to order at 10:05am. The Notice and Agenda of the meeting were taken as read.

2.0 Confirmation of Minutes of the 45th Rules Change Panel Meeting

The Minutes of the 45th Rules Change Panel meeting held on Tuesday, 8 September 2009 was tabled.

As raised by Ms Annie Tan, the last line of page 10 of the Minutes was corrected to reflect Mr Ng Meng Poh as a representative of the Retail Electricity Licensee class of market participant.

There being no other amendments to the Minutes, the Rules Change Panel approved the Minutes.

3.0 Matters Arising

The Panel noted that, as outlined, the follow-up action was completed on the matters arising.

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4.0 Monitoring List

Mr Poh informed the Panel that the first 4 items being monitored were within the tolerance levels that were set. Item 5, "Financial Ratings of Bankers Guarantees Held By EMC", is a new item on the list, arising from the Panel's decision at the 45th RCP Meeting to closely monitor the BG concentration and ratings of the BG-issuing banks.

On item 3, "Payment to Reserve/Regulation Providers who failed to provide", Mr Langdale pointed out the two large reserve payments (\$302,800 in May 2009 and \$87,613 in Sep 2009) and expressed concern that the Sep 2009 12-month rolling total of \$550,666 is now very close to the tolerance level of \$600,000¹.

Mr Poh explained that large reserve payments are mainly caused by high reserve prices that coincided with registered facilities not being able to provide reserve/regulation. As reserve costs are paid by a group of generators to another, there should be a netting-off effect in the long run for such reserve payments to non-providers. He added that the RCP had decided in 2004 to monitor the 12-month rolling total and consider taking action when it exceeds \$600,000, or 1% of the \$61,000,000 combined reserve/regulation payments in 2003. He also informed that for the 12-month period to July 2009, the overpayment was 0.41% of total reserve/regulation payments.

For a better understanding of this issue, the Chairman asked EMC to look at the distribution of reserve/regulation payments among the generators, possible claw-back options and their likely costs of implementation.

EMC

5.0 Summary of Outstanding Rule Changes

The Panel noted the contents of the paper.

6.0 Rules Change Workplan Status Update

The Panel noted the contents of the paper.

¹ In 2004, the RCP had decided to monitor the 12-month rolling total for combined reserve/regulation payments to providers who had failed to provide and look into implementing a claw-back mechanism should it exceed \$600,000.

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Review of EMC Fees on Interruptible Load Providers

(Paper No. EMC/RCP/46/2009/CP20)

7.0 The paper analyses the rule change proposal to charge Interruptible Load providers of reserve (ILs) EMC fees, since they receive services from EMC. On balance, weighing the minimal benefits – no material difference or improvement in economic efficiency to the industry – with the likely system costs required to implement the rule change, EMC proposed not to change the current method of charging EMC fees i.e. reserve/regulation providers, including ILs, will not be charged EMC fees.

In response to RCP's queries at the previous meeting, Mr Henry Wee updated the meeting that the system changes required to allow retailers and wholesale traders to offer IL in the market and receive schedules were estimated to cost S\$100,000 and require 11 weeks to implement.

Mr Philip Tan enquired about EMC's total cost of system implementation, so as to know the proportion of S\$100,000 to the total cost. The Chairman replied that EMC's original cost to set-up the market was about S\$14million. This meant that S\$100,000 would represent about 1% of the total cost.

Mr Langdale asked if an increase in the cost of reserve, by imposing fees on ILs, would increase costs to the market. The Chairman clarified that charging ILs EMC fees will change the allocation of fees among market participants, rather than increase costs to the market.

Mr Yeo commented that by charging a part of EMC fees to ILs, the causer-pays principle would apply.

Mr Kay noted that when the market design was drawn-up, there was already a provision for ILs to be included. He reiterated Diamond Energy's comment that ILs are the load facilities of contestable consumers, who already pay EMC fees and PSO fees for every MWh of energy consumed. It would thus be duplicative to charge ILs EMC fees for providing reserve. Dr Goh agreed with Diamond Energy's comment, and said that consumers should not have to pay duplicative fees.

Mr Philip Tan questioned why the implementation cost is so high if the EMC systems had already provisioned for ILs to be part of the market. Mr Poh clarified that while certain functions could be part of the original design, the decision to implement them would require changes, e.g. in the case of IL a) implementation of reserve zone limits and overall limits on each class of reserve, as required by PSO; and b) informational requirements of MPs.

The Chairman called for a vote on the issue.

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The following 8 RCP members **voted for** the proposal not to change the current method of charging EMC fees:

Brendan Wauters

(representative of the Generation Licensee class of market participant)

Sim Meng Khuan

(representative of the Generation Licensee class of market participant)

Ng Meng Poh

(representative of the Retail Electricity Licensee class of market participant)

Dallon Kay

(representative of the Wholesale Electricity Market Trader class of market participant)

Chan Hung Kwan

(representative of the Transmission Licensee class of market participant)

Kenneth Lim

(employee of the EMC not being the Chief Executive)

Robin Langdale

(representative who is experienced in financial matters in Singapore)

Goh Bee Hua

(representative of the consumers of electricity in Singapore)

2 RCP members **voted against** the proposal:

Philip Tan

(representative of the Generation Licensee class of market participant)

Yeo Lai Hin

(representative of the PSO)

1 RCP member **abstained** from voting:

Annie Tan

(representative of the Retail Electricity Licensee class of market participant)

The Chairman summarised the results of the voting and by majority vote, the current method of charging EMC fees will not be changed.

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8.0 **Extension of Exemption To Allow Affiliates of Temasek Holdings to be Concurrently Represented on the RCP** (Paper No. EMC/RCP/46/2009/290)

Ms Wang Jing presented the paper, including stakeholders' comments and EMC's response. There are still quite a number of Temasek-linked companies in the SWEM who are potentially affiliated to each other, thus, an exemption is still required to allow these companies to be concurrently represented on the RCP. EMC recommends the RCP to support the proposal to extend the exemption period for one more year i.e. until 31 Dec 2010.

Mr Langdale said the practical question to consider here is whether Temasek is able to control voting on the RCP through its potentially-affiliated MPs.

Mr Sim Meng Khuan said it was "a grey area" whether the Sembcorp and Keppel MPs are affiliated to Temasek. He stated that the exemption should only be given to the transmission licensee and the MSSL, which are clearly affiliated to Temasek.

Mr Philip Tan agreed and said the RCP should be mindful it is not giving a blanket exemption, now that 3 generating companies have been divested. He suggested that the RCP extend the exemption for just 3 or 6 months, in the meantime, clarification can be sought on whether the Sembcorp and Keppel MPs are affiliated to Temasek.

Mr Kay said there may be little cause for concern about giving a blanket exemption, as there is already an independence test when an MP is nominated to be on the RCP. Mr Langdale said the RCP also needs to consider the consequence of not giving an exemption for Temasek affiliates i.e. there could be an underrepresentation on the RCP, if Sembcorp and Keppel MPs can no longer be RCP members.

The Chairman said that by exempting only the transmission licensee and the MSSL, while Sembcorp and Keppel MPs are still represented on the RCP, there could be legal challenges stating that Sembcorp and Keppel are indeed affiliates of Temasek and questioning their representation on the RCP. Should the Panel's representation really be challenged, it would be a dangerous situation. The Chairman called for a vote on the issue.

The following 10 RCP members **voted for** the proposal to extend the exemption, for Temasek affiliates to be concurrently represented on the RCP, by one more year:

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Brendan Wauters

(representative of the Generation Licensee class of market participant)

Philip Tan

(representative of the Generation Licensee class of market participant)

Ng Meng Poh

(representative of the Retail Electricity Licensee class of market participant)

Annie Tan

(representative of the Retail Electricity Licensee class of market participant)

Dallon Kay

(representative of the Wholesale Electricity Market Trader class of market participant)

Chan Hung Kwan

(representative of the Transmission Licensee class of market participant)

Kenneth Lim

(employee of the EMC not being the Chief Executive)

Yeo Lai Hin

(representative of the PSO)

Robin Langdale

(representative who is experienced in financial matters in Singapore)

Goh Bee Hua

(representative of the consumers of electricity in Singapore)

1 RCP member **voted against** the proposal:

Sim Meng Khuan

(representative of the Generation Licensee class of market participant)

No RCP member abstained from voting.

The Chairman summarised the results of the voting and by majority vote, the proposal was approved.

9.0 Publication of Historical Dispatch Schedules

(Paper No. EMC/RCP/46/2009/CP21)

The rule change proposal was to publish the historical dispatch schedule of all generating units by period with unit ID. Mr Henry Wee presented the paper, including stakeholders' comments and EMC's response.

Based on the paper's analysis, publishing historical dispatch schedules has the potential hazards of aiding gencos to exercise market power and facilitating collusion. At the same time, there appears to be weak justification for enhancing economic efficiency or market monitoring. Given SWEM's high level of market concentration, on balance, the risks associated with this proposal are more well-established and pertinent compared to the benefits – thus, EMC recommends the RCP to not support this proposal.

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The Chairman clarified that EMC is not alleging market collusion is taking place, but that releasing such data could support this – thus, EMC had suggested reviewing this proposal only when there is reduced market concentration in the Singapore electricity industry.

Mr Wauters said more information will aid transparency and work against market collusion. He pointed out that vesting contracts are in place in Singapore to mitigate market power – thus, if there is an issue with the abuse of market power, this can be addressed via the vesting contracts. Mr Wauters noted that markets like Australia and New Zealand, which Singapore is frequently benchmarked against, already release such data (including prices). He thought that European markets are not a relevant benchmark as their market design is different.

Mr Philip Tan stated Tuas' view that the information released should be complete (i.e. to include line constraints and supply conditions), so as to give a full picture of the electricity system. Providing only a partial release of information will not give a full picture and may lead to wrong perceptions of the market, e.g. by the public who are not used to analysing such data.

Mr Kay voiced his support for complete information release, so that MPs can use the information as they see fit. He said that Singapore's market has monitoring and surveillance panels in place to investigate abuse, so not releasing data because of the potential of abuse is not a strong argument. The release of data and transparency is a key signpost of Singapore market's evolution, which is also in line with the markets that Singapore is benchmarked against.

Ms Annie Tan said she agreed with the above comments supporting the release of information provided they are complete. Mr. Langdale added that it is better for all to have access to such data, as opposed to some parties having this information and the rest not being aware.

As mentioned in the presentation by EMC, additional costs would be incurred to publish historical dispatch schedules. Dr Goh asked for details about such costs.

Mr Poh said EMC maintained its recommendation not to release the data.

The Chairman called for a vote on the issue.

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6 RCP members **voted for** the proposal, to publish the historical dispatch schedule of all registered facilities by period with unit ID:

Brendan Wauters

(representative of the Generation Licensee class of market participant)

Ng Meng Poh

(representative of the Retail Electricity Licensee class of market participant)

Annie Tan

(representative of the Retail Electricity Licensee class of market participant)

Dallon Kay

(representative of the Wholesale Electricity Market Trader class of market participant)

Robin Langdale

(representative who is experienced in financial matters in Singapore)

Goh Bee Hua

(representative of the consumers of electricity in Singapore)

3 RCP members **voted against** the proposal:

Sim Meng Khuan

(representative of the Generation Licensee class of market participant)

Philip Tan

(representative of the Generation Licensee class of market participant)

Kenneth Lim

(employee of the EMC not being the Chief Executive)

2 RCP members **abstained** from voting:

Chan Hung Kwan

(representative of the Transmission Licensee class of market participant)

Yeo Lai Hin

(representative of the PSO)

The Chairman summarised the results of the voting and by majority vote, the proposal was approved.

The Chairman requested EMC to revert with proposed rules to publish dispatch schedules (quantity only) and the estimated costs and timeline for doing so.

EMC

10.0 Review of Rule Change Workplan Exercise

(Paper No. EMC/RCP/46/2009/07)

Ms Nerine Teo presented the review and requested the RCP to discuss the following issues:

- a. Decide on whether to include the identities of proposers
- b. Agree to include an option for the removal of proposed issues

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- c. Agree on the Revised Template for “New Issues to be Addressed”
- d. Decide on a prioritization ranking methodology

The RCP agreed that the identities of proposers should be included in any new issues proposed during the Rule Change Prioritisation Exercise. This decision will take effect in the next exercise which begins in December 2009.

With regards to item (b), Mr Philip Tan sought clarification on whether an issue should be removed only by the proposer of the said issue. The Chairman replied that all stakeholders could indicate whether they would like an issue removed during the consultation. Following consultation with each stakeholder, these removal requests would be tabled at the RCP for discussion and decision on whether any item on that list should be removed.

The RCP agreed that this option to remove proposed issues will be included in the consultation sheet prepared for the feedback sessions with stakeholders during the upcoming Prioritisation Exercise.

Mr Philip Tan commented that, for item (c), the description “Impact on Stakeholders” suggests that proposers are required to submit a cost estimate on their proposed issue, which might be difficult to quantify at that stage. He thus requested that this section be removed. Ms Nerine Teo replied that the proposers were not required to submit cost estimates but rather, a qualitative assessment of the outcome of the proposed issue.

Mr Kenneth Lim added that it would be beneficial to retain this section as it gives EMC and the RCP a better understanding of the proposal.

Mr Dallan Kay then proposed that the description be changed to “Implication on Stakeholders” and be indicated as optional in the template, since it could be difficult to assess the effect on stakeholders at that juncture.

The RCP agreed to rephrase the template from “Impact on Stakeholders” to “Implication on Stakeholders”, and to indicate that this section is optional.

On item (d), Mr Langdale said that there is merit in assessing the outcome under both prioritisation methodologies. For example, it would indicate which issues are more important to a given class of licensee.

The RCP decided to retain rankings under both methodologies for the upcoming Prioritisation Exercise.

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11.0 Compensation for Excess Regulation
(Paper No. EMC/RCP/46/2009/CP22)

Ms Nerine Teo presented the paper. Notable points were

(i) Since the PSO determines the amount of regulation required using the Forecast Demand and the Actual System Demand, both of which are calculated on an average basis across the whole period, the regulation requirement should be understood to be the average requirement across the whole period.

(ii) Based on this principle, the criteria for the over-provision of regulation should be determined as when the GRFs actual energy output falls outside the total expected energy output range, over the whole period.

(iii) However, there were six exclusions to the criteria whereby the GRFs would not be considered to have over-provided regulation.

Mr Philip Tan quoted PA Consultants' statement that providing 10MW of regulation means "a generator responding by +/-10MW relative to its scheduled generation level". He interpreted this to mean that any instantaneous deviation outside of the range constitutes providing excess regulation.

To Mr Philip Tan's comment, Mr Yeo Lai Hin clarified that the way regulation is procured and paid is on an average basis over the whole period. He added that currently the regulation reserve is procured and paid based on the capacity – it is not paid based on the actual output. The settlement system may have to be upgraded if compensation is to be included.

Mr Langdale said that the PA Consultants' slides (as circulated at the meeting) do not directly address the issue of over-provision of regulation, so may not be apt to use in the current context. He noted that in cases of up regulation exceeding the scheduled level, the generator would already be paid for the additional IEQ and so does not need to be compensated. He thought that it is cases of down regulation exceeding the scheduled level which should be compensated.

To Mr Langdale's comment, Mr Philip Tan explained that while gencos are paid for additional energy injections when providing up regulation exceeding the scheduled level, gencos should still be compensated for over-providing regulation. This is because regulation by definition is a service provided by generating units to swing their loads within the scheduled quantity in response to power system imbalance, in doing so, there is an associated cost i.e. higher cost to generators.

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Mr Yeo commented that the data submitted by stakeholders (Table 2 of the RCP paper) shows that GRFs had provided excess regulation over some of the period from 1 January 2009 to 30 June 2009 (8,688 period). The data also shows that for the rest of the period, the GRFs are under-providing or providing within its market schedule.

In the paper, EMC had requested for SCADA data to evaluate whether there is no over-provision in total i.e. under-provision of regulation by some GRFs are compensated through over-provision by other GRFs.

Mr Yeo commented that it is not appropriate to use SCADA data for the evaluation. The SCADA values received by the Electricity Management System (EMS) are based on a fixed sampling rate, so some critical data may not be captured by EMS. Furthermore, this data inherently contain measurand errors. Mr Yeo proposed to use IEQ collected by EMC to carry out the evaluation, since the settlement is based on IEQ.

Mr Poh explained that EMC requested for SCADA data because in the “Concept Paper 7: Accuracy of Short-term load forecast” reviewed in 2005, the TWG decided that the actual system online generation data (which uses SCADA) would be more accurate to use than IEQ (which uses meters to measure) when comparing with the load forecast (VSTLF) which uses SCADA to measure. Therefore as schedules are derived from VSTLF, we should use SCADA data for comparison.

Following the discussion at the meeting, the RCP requested for further analysis to be done before deciding whether a compensation regime for the provision of excess regulation should be introduced. The analysis should include:

- (a) Evaluating whether there is over-provision of regulation across the whole market (i.e. whether the over-provision of regulation by some GRFs is matched by the under-provision by other GRFs).
- (b) Select some periods for analysis to better understand the issue.

EMC will work with PSO for the data needed for the evaluation.

EMC

There being no other matters, the meeting ended at 1:05pm.

Dave E Carlson
Chairman

Minutes taken by:
Mok XinYing
Senior Economist – Market Administration